

ABSTRACT OF THE DISCLOSURE

Recombinant polynucleotide that contains a plurality of first polynucleotides encoding an antigenic peptide are provided by this invention. The first
5 polynucleotides are operatively linked to each other to enhance translation of the polynucleotides to the antigenic peptide and binding of the antigenic peptide to MHC molecules. In a further embodiment, the recombinant contains a plurality of a second polynucleotide encoding multiple copies of antigenic peptides having an amino acid sequence that is different from the peptides encoded by the first polynucleotides.

10 The polynucleotides are useful as cancer vaccines or in adoptive immunotherapy. In these embodiments, the polynucleotides encode a antigenic peptide that will induce an immune response to a tumor or cancer. Alternatively, the polypeptides encodes antigens that induce T cell anergy for use in autoimmune disorders. Still further, the antigen is a pathogenic antigen to induce an immune response against a pathogen
15 such a virus or bacterial pathogen.

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